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**RELATED CORRESPONDENCE**

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January 3, 2000

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

ADJUDICATORY

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
	)	
(Private Fuel Storage Facility)	)	

**APPLICANT'S OBJECTIONS TO  
STATE OF UTAH'S SIXTH SET OF DISCOVERY REQUESTS**

Applicant Private Fuel Storage L.L.C. ("Applicant" or "PFS") files these objections to the December 20, 1999 "State of Utah's Sixth Set of Discovery Requests Directed to the Applicant and Skull Valley Band of Goshutes" ("State's Sixth Discovery Requests"). Per agreement with the State, Applicant will file its substantive responses on January 7, 2000, to those discovery requests which it will be answering as indicated below.

**I. GENERAL OBJECTIONS**

These general objections apply to the Applicant's responses to all of the State's Sixth Discovery Requests.

1. The Applicant objects to the State's discovery requests to the extent they seek discovery beyond the scope of the Utah contentions, as admitted by the Board in this proceeding. The State is only permitted to obtain discovery on matters that pertain to the subject matter with which the State is involved in this proceeding. 10 C.F.R. § 2.740(b).

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By its express terms, the State's Sixth Discovery Request relates to the "TranStor Dynamic Response to 2000 Year Return Seismic Event," Holtec Report No. HI-992295 (September 1999). State's Sixth Discovery Request at 8. Specifically, the introductory paragraph to the specific discovery requests states in full as follows:

These discovery requests relate to a report prepared on behalf of Private Fuel Storage, LLC, entitled "Transtor Dynamic Response to 2000 Year Return Seismic Event," Holtec Report No. HI-992295 (September 1999) [Proprietary] (hereafter "Holtec Report on TranStor Dynamic Response").

Id. (footnote omitted). This report contains PFS's analysis of the stability of the TranStor storage cask, which is the topic of Contention Utah GG – Failure to Demonstrate Cask-Pad Stability During Seismic Event for TranStor Casks. As admitted by the Board, however, the subject matter of Contention Utah GG is limited to the narrow issue of PFS's consideration of the coefficient of friction in the TranStor cask stability analysis. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 210-11 (1998).<sup>1</sup> PFS objects to the State's attempt to circumvent the limits of the Board's decision by seeking information on the TranStor cask stability analysis under the guise of Utah Contention L. If the State has concerns with the TranStor cask stability analysis, it should have raised those concerns in its initial late-filed contention, or in an amended late-filed Contention GG. Indeed, the State specifically sought to raise many of the same issues on which it now seeks discovery in its original late-filed Contention Utah

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<sup>1</sup> See also, Applicant's Response to State of Utah's Motion to Compel Applicant to Respond to State's Fifth Set of Discovery Requests, dated December 27, 1999, at 2-3, and Applicant's Motion for Summary Disposition of Utah Contention GG – Failure to Demonstrate Cask-Pad Stability During Seismic Event for TranStor Cask, dated December 30, 1999, at 2-3.

GG, but the Board rejected them both for lack of good cause for late filing and for insufficient bases. See LBP-98-7, 47 NRC at 210-211.

2. The Applicant objects to State's instructions and definitions on the grounds and to the extent that they request or purport to impose upon the Applicant any obligation to respond in manner or scope beyond the requirements set forth in 10 C.F.R. §§ 2.740, 2.741 and 2.742.

3. The Applicant objects to the State's discovery requests to the extent that they request discovery of information or documents protected under the attorney-client privilege, the attorney work product doctrine, and limitations on discovery of trial preparation materials and experts' knowledge or opinions set forth in 10 C.F.R. § 2.740 or other protection provided by law. With respect to document production requests, the Applicant has provided the State with a Privilege Log that identifies documents subject to these privileges and protections, which the Applicant reserves the right to supplement.

4. The Applicant objects to the State's discovery requests to the extent they seek discovery from entities that are not parties to this proceeding. The State is only permitted to directly propound requests for admission, interrogatories, and document production requests on entities that are parties to this proceeding. 10 C.F.R. §§ 2.740b, 2.741, 2.742.

## **II. UTAH CONTENTION L (Geotechnical)**

### **A. REQUEST FOR ADMISSIONS – Utah Contention L**

**REQUEST FOR ADMISSION NO. 1.** Do you admit that the upper soil layer at the PFS site is a soft thin layer over a competent soil layer? *See, e. g.,* Geomatrix Calculation: Soil and Foundation Parameters for Dynamic Soil Structure Interaction

Analyses [05996.02-G(PO18)-1 (Rev. 1)], at § 2 (Subsurface Conditions).

**APPLICANT'S RESPONSE:** PFS objects to this request as vague, Dubin v. E.F. Hutton Group, Inc., 125 F.R.D. 372, 376 (S.D.N.Y. 1989), in that the term “soft thin layer” is neither defined nor identified. Nevertheless, without waiving its objection, PFS intends to answer this request in its January 7, 2000 response.

**REQUEST FOR ADMISSION NO. 2.** Do you admit that for dynamic analysis NUREG 0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, SRP No. 3.7.2, *Seismic System Analysis*, requires that when a thin soft soil layer is present at the site, the input motion should be specified at the top of the competent soil layer?

**APPLICANT'S RESPONSE:** PFS objects to this request as vague in that the term “thin soft soil layer” is neither defined nor identified. Nevertheless, without waiving its objections, PFS intends to answer this request in its January 7, 2000 response.

**REQUEST FOR ADMISSION NO. 3.** Do you admit that in the Holtec Report on TranStor Dynamic Response, the input motion used for dynamic analysis represents the motion of the ground at the ground surface level at the top of the soft soil layer?

**APPLICANT'S RESPONSE:** PFS objects to this request because its subject matter – “the input motion used” in PFS’s cask stability analysis for the TranStor cask – concerns a topic previously rejected by the Board, and is not relevant to Utah L. See General Objection No. 1. In its determination of the admissibility of Late-Filed Contention Utah GG, the Board refused to admit Basis 2, which concerned the sufficiency of the information provided about the site-specific soil characteristics inputted into the model for the cask stability analysis of the TranStor cask. LBP-98-7, 47 NRC at 210-11. The State’s discovery request therefore requests discovery with respect to a topic rejected by the Board for litigation in this licensing proceeding.

PFS also objects to this request as vague in that the term “soft soil layer” is neither defined nor identified.

**REQUEST FOR ADMISSION NO. 4.** Do you admit that for nonlinear analysis, in order to consider the effect of phasing in ground motion, it is a conservative approach, and common industry practice, to use multiple time histories?

**APPLICANT’S RESPONSE:** PFS objects to this request as it concerns the appropriateness of modeling methodologies and is thus not relevant to Contention Utah L. The request does not seek information relevant to, nor will it lead to admissible evidence concerning the characterization of geology, seismology, ground motion, and subsurface soils of the PFS Facility (“PFSF”) site. Rather, the request seeks information concerning what is “common industry practice” for a non-linear analysis. The methodologies used in analyzing the stability of the storage casks, and whether they conform to common industry practice, is not relevant to the characterization of PFS’s site-specific geotechnical conditions.

PFS also objects on the grounds that the type of “nonlinear analysis” is undefined.

**REQUEST FOR ADMISSION NO. 5.** Do you admit that PFS relies on only one set of time histories for its non-linear analysis?

**APPLICANT’S RESPONSE:** Based on the statement preceding the State’s discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State’s Sixth Discovery Request at 8, the “non-linear analysis” “that PFS relies on” refers to the TranStor cask stability analysis. As such, PFS objects on the grounds stated in General Objection No. 1 in that the request concerns the cask stability analysis for the TranStor cask. PFS also objects on the grounds that this request is outside the

scope of Utah L, as admitted by the Board. Contention Utah L is limited to alleged variation in ground motion due to “near surface traces of potentially capable faults (the Stansbury and Cedar Mountain faults).” State of Utah’s Contentions on the Construction and Operating License Application by Private Fuel Storage, LLC for an Independent Spent Fuel Storage Facility, dated November 23, 1997, at 82-83 . Further, this request concerns the number of time histories used in the analysis of the TranStor cask stability and is not connected to the issue of “near surface traces of potentially capable faults.”

**REQUEST FOR ADMISSION NO. 6.** Do you admit that (a) impinging seismic waves will approach the foundation in an angle because of the proximity of the site to a major active fault; (b) such wave motion would result in an unbalanced rocking and torsional motion of the pad contributing to the displacement results; and (c) PFS has not considered the effects of such wave motion in its overall design?

**APPLICANT’S RESPONSE:** PFS intends to answer part (a) of this request in its January 7, 2000 response. PFS objects to parts (b) and (c) on the grounds stated in General Objection No. 1 in that it solely concerns the modeling and analysis of the stability of the TranStor cask. Part (b) concerns Utah GG in that the contribution of “unbalanced rocking and torsional motion of the pad” “to the displacement results” refers to the potential effects of changing the input parameters (i.e., the angle of the seismic waves) to the TranStor cask stability analysis. Part (c) also concerns Utah GG in that it asks whether PFS considered the effects of changing the input parameters in the TranStor cask stability analysis. The request does not seek information relevant to, nor will it lead to admissible evidence concerning the characterization of geology, seismology, ground motion, and subsurface soils of the PFSF site. Rather, the request seeks information concerning the effect of inputting specific geologic conditions into the

TranStor cask stability analysis and PFS's consideration of these conditions. The effect of using different conditions in the TranStor cask stability analysis is not relevant to the characterization of the geotechnical conditions at the PFSF site.

**REQUEST FOR ADMISSION NO. 7.** Do you admit that PFS has not described how fault-normal and fault-parallel components of the motion are aligned with the pad orientation?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, this request seeks to determine whether the TranStor cask stability analysis describes how "the components of motion are aligned . . ." As such, PFS objects on the grounds stated in General Objection No. 1 in that the subject matter of the request, whether the TranStor cask stability analysis describes the site-specific components of ground motion, concerns a topic previously rejected by the Board in its consideration of the admissibility of Late-Filed Contention Utah GG. LBP-98-7, 47 NRC at 210-11. The Board refused to admit Basis 2 of Late-Filed Contention GG, which concerned the sufficiency of the information provided about the site-specific soil characteristics inputted into the stability analysis of the TranStor cask. This request explicitly seeks information concerning the sufficiency of the information used in the TranStor cask stability analysis and is not relevant to the characterization of PFS's site-specific geotechnical conditions under Utah L.

**REQUEST FOR ADMISSION NO. 8.** Do you admit that in a layered system the foundation springs and damping coefficients are highly frequency dependent?

**APPLICANT'S RESPONSE:** PFS intends to answer this request in its January 7, 2000 response.

**REQUEST FOR ADMISSION NO. 9.** Do you admit that PFS has selected foundation lumped properties ( *e.g.*, representation of the soil-foundation system by a set of constant soil springs and the stiffness of a rigid foundation resting on a uniform elastic halfspace) without examining the soil-structure interaction frequency and frequency dependency of the spring and damping coefficients?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, this request refers to the selection process of soil properties for the TranStor cask stability analysis. As such, PFS objects on the grounds stated in General Objection No. 1 in that its subject matter, the selection of foundation lumped properties, concerns a topic previously rejected by the Board in its consideration of the admissibility of Late-Filed Contention Utah GG. LBP-98-7, 47 NRC at 210-111. Specifically, the Board refused to admit Basis 1 of late-filed Contention GG, which concerned the adequacy of the consideration given to site-specific soil characteristics in the TranStor cask stability analysis. This request explicitly seeks information relating to the parameters considered in selecting the site-specific soil characteristics used in the TranStor cask stability analysis, expressly rejected by the Board for litigation in this proceeding.

**REQUEST FOR ADMISSION NO. 10.** Do you admit that PFS has inappropriately applied the damping coefficients for a rigid foundation to a flexible foundation?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, this request refers to the choice of input parameters for the TranStor cask stability analysis. As such, PFS objects on the grounds



stated in General Objection No. 1 in that its subject matter, the choice of damping coefficients used in the TranStor cask stability analysis, concerns a topic previously rejected by the Board in its consideration of the admissibility of Late-Filed Contention Utah GG. LBP-98-7, 47 NRC at 210-11. Specifically, the Board refused to admit Basis 1 of late-filed Contention GG, which concerned the adequacy of the consideration given to site-specific soil characteristics in the TranStor cask stability analysis. This request explicitly seeks information relating to the adequacy of site-specific soil characteristics used in the TranStor cask stability analysis, expressly rejected by the Board for litigation in this proceeding. Moreover, whether PFS uses a damping coefficient for a flexible or rigid foundation in its cask stability analysis is a challenge to the cask-pad stability analysis, and is not relevant to the characterization of PFS's site-specific geotechnical conditions under Utah L.

**REQUEST FOR ADMISSION No. 11.** Do you admit that PFS has presented no data to quantify the effect of the soil-structure interaction on the cask responses, including pad-to-pad interaction on the displacement results?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, this request refers to the information presented in the TranStor cask stability analysis on soil-structure interaction. As such, PFS objects on the grounds stated in General Objection No. 1 in that its subject matter, whether PFS presented data quantifying the effect of the soil-structure interaction on the TranStor cask stability analysis, concerns topics previously rejected by the Board in its consideration of the admissibility of Late-Filed Contention Utah GG. LBP-98-7, 47 NRC

at 210-11. Specifically, the Board refused to admit Basis 1 of late-filed Contention GG, which concerned the adequacy of the consideration given to site-specific soil characteristics in the TranStor cask stability analysis, and Basis 2, which concerned the sufficiency of the information provided about the site-specific soil characteristics inputted into the model. This request explicitly concerns information relating to the adequacy of site-specific soil characteristics used in the TranStor cask stability analysis, and seeks information about the site-specific soil characteristics inputted to the model expressly rejected by the Board for litigation in this proceeding. Moreover, whether or not PFS provides data to quantify the effect of soil-structure interactions in its cask stability analysis is a challenge to the cask stability analysis, and is not relevant to the characterization of PFS's site-specific geotechnical conditions under Utah L.

**REQUEST FOR ADMISSION No. 12.** Do you admit that in the nonlinear calculation PFS has provided no data to justify its representation of linear elements in the foundation and the supporting soil medium?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, "the nonlinear calculation" referred to in the request is the TranStor cask stability analysis. As such, PFS objects on the grounds stated in General Objection No. 1 in that its subject matter, whether PFS provides data justifying its representation of the foundation and soil in the TranStor cask stability analysis, concerns topics previously rejected by the Board in its consideration of the admissibility of Late-Filed Contention Utah GG. LBP-98-7, 47 NRC at 210-11. Specifically, the Board refused to admit Basis 1 of late-filed Contention GG, which

concerned the adequacy of the consideration given to site-specific soil characteristics in the TranStor cask stability analysis, and Basis 2, which concerned the sufficiency of the information provided about the site-specific soil characteristics inputted into the model. This request explicitly concerns information relating to the adequacy of site-specific soil characteristics used in the TranStor cask stability analysis, and seeks information about the site-specific soil characteristics inputted to the model expressly rejected by the Board for litigation in this proceeding. Moreover, whether or not PFS provides data to justify its representation of the foundation and the supporting soil medium in the TranStor cask stability analysis is a challenge to the cask stability analysis, and is not relevant to the characterization of PFS's site-specific geotechnical conditions under Utah L.

**REQUEST FOR ADMISSION No. 13.** Do you admit that PFS has not described how the equations of motion for the basic formulation of the cask system are solved?

**APPLICANT'S RESPONSE:** Based on the statement preceding the State's discovery requests that the requests relate to the Holtec Report on TranStor Dynamic Response, State's Sixth Discovery Request at 8, this request refers to "the equations of motions" from the TranStor cask stability analysis. As such, PFS objects on the grounds stated in General Objection No. 1 in that whether or not PFS describes how the equations of motion are solved in the TranStor cask stability analysis is a challenge to the cask stability analysis, and is not relevant to the characterization of PFS's site-specific geotechnical conditions under Utah L.

## **B. DOCUMENT REQUESTS - Utah Contention L**

**DOCUMENT REQUEST NO. 1.** Please provide all documents relating to the assumptions, calculations and conclusions used by PFS in its foundation modeling.

**APPLICANT'S RESPONSE:** PFS has produced all such reports or studies relevant to the subject matter of Utah L. PFS will notify the State upon updating its repository of documents relevant to contention Utah L.

**DOCUMENT REQUEST NO. 2.** Please provide all documents relating to the assumptions, calculations and conclusions used by PFS in its cask modeling.

**APPLICANT'S RESPONSE:** To the extent the State requests documents on its cask modeling beyond the scope of Utah L, PFS objects on the grounds of relevance. PFS has produced all such reports or studies relevant to the subject matter of Utah L.

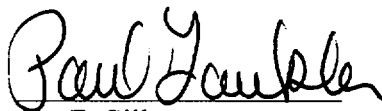
**DOCUMENT REQUEST NO. 3.** To the extent that PFS denies Requests for Admissions No. 1 through 13, in whole or in part, please provide all documents that relate to those denials.

**APPLICANT'S RESPONSE:** PFS has produced and made available any relevant documents in its possession, custody, or control relating site and subsurface investigations necessary to determine geologic conditions, potential seismicity, ground motion, soil stability and foundation loading. PFS is aware of no additional documents to produce at this time. PFS will notify the State upon updating its repository of documents relevant to contention Utah L maintained at Parsons Behle & Latimer.

**DOCUMENT REQUEST NO. 4.** To the extent that PFS admits Requests for Admissions No. 1 through 13, in whole or in part, please provide all documents that relate to those admissions.

**APPLICANT'S RESPONSE:** See response to Document Request No. 3.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Paul Gaukler".

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Dated: January 3, 2000

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
Before the Atomic Safety and Licensing Board

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In the Matter of	)	
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PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
	)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

OFFICE OF THE SECRETARY  
ADJUDICATORY FILE

**CERTIFICATE OF SERVICE**

I hereby certify that copies of "Applicant's Objections to State of Utah's Sixth Set of Discovery Requests" were served on the persons listed below (unless otherwise noted) by e-mail with conforming copies by U.S. mail, first class, postage prepaid, this 3rd day of January, 2000.

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